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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,405	10/16/2001	Takashi Hosotani	50340-110	3180

7590 02/10/2005

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Washington, DC 20005-3096

EXAMINER

JULES, FRANTZ F

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/977,405

Applicant(s)

MCDERMOTT ET AL

Examiner

Frantz F. Jules

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15, lines 5-6, the phrase "links being directly and pivotally mounted to the axle at both ends" is confusing as it is unclear how can both ends of the links be connected to the axle. Normally one would expect one end of each of the links to be connected to the axle and the other end of each of the links to be connected to the vehicle frame as shown in fig. 16 the drawings.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US 1,127,608) in view of Chan et al (US 6,357,768).

Ferguson discloses an axle supporting structure for industrial vehicles comprising an axle supporting wheels (1) a vehicle frame (2) and a pair of links (5) which connect both ends of the axle and the vehicle frame, the links being disposed upwardly of the axle in

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a vertical direction and being disposed symmetrically about the center of the vehicle and inclined symmetrically with respect with respect to each other in a trapezoidal arrangement since they constitute two parallel sides, wherein the pair of links (5) incline differently according to the relative displacement of the axle and the vehicle frame in the left and right direction as steering of the vehicle will produce this effect, and the posture of the vehicle is thereby controlled.

Ferguson discloses all of the features as listed above but does not disclose an axle supporting structure comprising links that are directly and pivotably mounted to the axle at both ends. The general concept of providing link members that are directly and pivotally connected to both end of an axle is well known in the art as illustrated by Chan et al which disclose the teaching of links that are directly and pivotably mounted to the axle at both ends. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ferguson to include the use of links that are directly and pivotably mounted to the axle at both ends in his advantageous axle supporting structure as taught by Chan et al in order to improve on the damping characteristics of the suspension while reducing the number of parts in the assembly.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willingham (US 2,770,468) in view of Cruz (US 2,623,758).

Willingham discloses an axle supporting structure for industrial vehicles comprising an axle supporting wheels (7) a vehicle frame and a pair of links (22, 26) which connect both ends of the axle and the vehicle frame, the links being disposed upwardly of the axle in a vertical direction and being disposed symmetrically about the center of the

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vehicle and inclined symmetrically with respect with respect to each other in a trapezoidal arrangement since they constitute two parallel sides, wherein the pair of links (22, 26) incline differently according to the relative displacement of the axle and the vehicle frame in the left and right direction as steering of the vehicle will produce this effect, and the posture of the vehicle is thereby controlled.

Willingham discloses all of the features as listed above but does not disclose an axle supporting structure such that the links that are directly mounted to the axle. The general concept of providing link members that are directly and pivotally connected to an axle supporting structure is well known in the art as illustrated by Cruz which disclose the teaching of links (5) that are directly and pivotably mounted to the axle at both ends thereof. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ferguson to include the use of an axle supporting structure such that the links that are directly mounted to the axle in his advantageous axle supporting structure as taught by Cruz in order to improve on the damping characteristics of the suspension while reducing the number of parts in the assembly.

Response to Arguments

6. Applicant's arguments filed 08/04/2004 have been fully considered but they are moot in view of the new ground of rejection.

Claims 1-14 stand withdrawn from further consideration.

Applicant's amendment to claim 15 to incorporate the limitations of "the links being directly and pivotally mounted to the axle at both ends" forces the withdrawal of the

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previous rejection of claim 15. However, the disclosure of an axle comprising links that are directly and pivotally mounted to an axle is well known in the art.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kincaid et al and Hoffman et al are cited to show related axle supporting structure comprising link members that are directly and pivotally supported to the shaft.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Frantz F. Jules

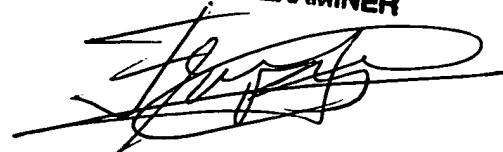
Examiner

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FFJ

February 7, 2005

FRANTZ F. JULES
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz F. Jules', written over the printed name and title.